

REMARKS

Claims 1-29 are pending and under consideration. Claims 1-5 have been amended. No new matter is presented in this Amendment.

REJECTIONS UNDER 35 U.S.C. §101:

Claims 1-5 are rejected under 35 U.S.C. §101 because the claimed invention is directed to non-statutory subject matters. The rejection is respectfully traversed and reconsideration respectfully requested.

Although it is believed that claims 1-5 are directed to statutory material, as discussed below, claims 1-5 have been amended as indicated, without narrowing the scope thereof, to include the language "computer-readable" as per the "information storage medium".

In regards to a rejection under 35 U.S.C. §101, the Examiner's *prima facie* rejection of claims for being drawn to an information storage medium which does not impart functionality to a computer or computing device is lacking both arguments and an application of such arguments to the rejected claims and fails to make apparent why the claims do not satisfy the requirements of 35 U.S.C. § 101 as per reciting an information storage medium that provides necessary functional and structural interrelationship. The burden in a *prima facie* case of unpatentability is on USPTO, as the Manual of Patent Examining Procedure at 2106(IV)(B) states that "[t]he burden is on the USPTO to set forth a *prima facie* case of unpatentability. Therefore if USPTO personnel determine that it is more likely than not that the claimed subject matter falls outside all of the statutory categories, they must provide an explanation." The Examiner fails to provide an argument or explanation for the rejection and merely recites statutory language without application of such language to the rejected claims, and thus provides only a conclusory statement for the rejection.

The conclusory statement and rejection by the Examiner notwithstanding, claim 1 of the present application satisfies the requirements of 35 U.S.C. §101. The MPEP at 2106 (IV)(B) discusses In re Nuijten, 84 uSPQ2d 1495 (Fed. Cir. 2008), where the Federal Circuit Court found that a claim with a signal with out a medium was unpatentable, yet when the signal was on a medium it was patentable. In fact, in In re Nuijten, claim 15 was found to be allowable and states "a storage medium having stored thereon a signal with embedded supplemental data." In

claim 1 of the present application, as currently amended the claim recites "a computer readable information storage medium comprising: multi-streams; interactive contents comprising information that enables an interface with a user; and reproduction control information comprising conversion information to convert the multi-streams and/or the interactive contents into digital television (DTV) streams." For the above, and in light of the example of In re Nuijten, the Examiner has not provided reason for how the functional interrelationships of the information on the storage medium fall outside the scope of 35 U.S.C. §101.

Furthermore, even assuming arguendo that some material of claim 1, such as the multi-streams, are nonfunctional descriptive material, the MPEP at 2106.01(II) states that "[n]onfunctional descriptive material may be claimed in combination with other functional descriptive multi-media material on a computer readable medium to provide the necessary functional and structural interrelationship to satisfy the requirements of 35 U.S.C. §101." Thus, with claim 1 reciting, in addition to multi-streams, features such as interactive contents comprising information that enables an interface with a user, and reproduction control information comprising conversion information to convert the multi-streams and/or the interactive contents into digital television (DTV) streams, comprised in an information storage medium, it is clear that the information storage medium provides necessary functional and structural interrelationship as required by 25 U.S.C. §101. Therefore, it is respectfully submitted that claim 1 meets the requirements of 35 U.S.C. §101.

Furthermore, Applicants respectfully assert that dependent claims 2-5 are allowable at least because of their dependencies from claim 1, and because they meet the requirements of 35 U.S.C. § 101.

REJECTIONS UNDER 35 U.S.C. §103:

Claims 1-5 are rejected under 35 U.S.C. §103(a) as being unpatentable over Morris (U.S. Patent Application Publication No. 2001/0007568 A1) and Rodriguez et al. (U.S. Patent Application Publication No. 2002/0059623 A1). The rejection is respectfully traversed and reconsideration respectfully requested.

For the purpose of review, Morris discloses a method and apparatus to convert an MPEG-2 Program Stream (PS) into an MPEG-2 Transport Stream (TS) (Morris, Abstract). More particularly, Morris discloses "transmultiplexing video and audio streams from a program stream

format to a transport stream format,” of the MPEG-2 specification. Reviewing Rodriguez, it discloses a file system for a subscriber network television system (Rodriguez, para. 10), to allow for both local and remote or virtual storage and access of information of a data delivery system for subscriber network television (Rodriguez, para. 19). At par. 19, Rodriguez states that “The two-way operation of the network allows for subscriber interactivity with services such as Pay-Per-View programming, Video-on-Demand programs, and interactive applications, such as Email, Internet connections, and electronic program guide (EPG) applications.” Rodriguez continues by stating that a Digital Broadband Delivery Service (DBDS) “provides the interfaces, network control, transport control, session control, and servers to access content and services, and distributes content and services to subscriber network TV subscribers” (Rodriguez, par. 20). Essentially, Rodriguez discloses a digital subscriber television service, and more particularly, a client-server file system to deliver content on the networked television system.

As per claim 1, as amended, of the present invention, Morris teaches multi-streams. However, because Morris only teaches audio and video streams, Morris cannot teach reproduction control information comprising conversion information to convert the multi-streams and/or the interactive contents into digital television (DTV) streams. The conclusion that Morris fails to teach the above is also apparent from the Examiner’s own statement that “Morris fails to explicitly teach interactive contents comprising information that enables interface with a user” (Office Action, pg. 2, item 4). Furthermore, Morris at par. 0064, discloses the structures of “PES packets that fit into 2048 byte sectors (PS packs),” where PES packets are primary elementary stream, or video stream, packets. Thus, the citation does not suggest conversion information to convert interactive contents. Therefore, it is respectfully submitted that Morris does not disclose, teach or suggest the features as recited in claim 1, as amended.

As shown above, neither Morris nor Rodriguez teach all of the individual features that the Examiner asserts they teach, and as such, when combined, Morris and Rodriguez do not teach the features as recited in claim 1, as amended. Additionally, the Examiner does not give sufficient reason for the combination of Morris and Rodriguez. The Examiner, on pg. 3 of the Office Action, states that: “[i]t would have been obvious to one of ordinary skill in the art at the time the invention was made to have a medium capable of communication with user to allow user defined controls for facilitation of desired programming viewed by user.” This is merely a conclusory statement that does not provide adequate reasoning or a rational underpinning as to why Rodriguez and Morris would be obvious to combine. Furthermore, the general terms used

by the Examiner merely describe an application like the electronic program guide disclosed Rodriguez and do not provide an underpinning as to why combining Rodriguez and Morris is obvious. Furthermore, the Examiner does not address how network based client-server interactive applications pertain to DVDs or such MPEG technologies stored on information storage mediums. The network applications disclosed in Rodriguez, such as pay-per-view or video-on-demand programming and email (Rodriguez, par. 0019), would have no application to the converting of an data stream in MPEG-2 PS format into a MPEG-2 TS format data stream (Morris, abstract), as Morris is concerned with. As the Morris invention and the Rodriguez invention are structurally different, the combination of the two would not be possible, and the Examiner does not provide an example of or reasoning on how such technologies and inventions could be combined.

In addressing obviousness, in KSR Int'l Co. v. Teleflex Inc., 127 S. Ct. 1727, the Supreme Court cited In re Kahn, which states "rejections on obviousness grounds cannot be sustained by mere conclusory statements; instead there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." In re Kahn, 441 F. 3d 977, 988 (CA Fed. 2006). Thus, as the Examiner has not provided either an articulated reason or rational underpinning to support the conclusion that combining Morris and Rodriguez is obvious, there is no reason to believe the two would be or could be combined. Thus, with no motivation to combine Morris and Rodriguez, it is respectfully submitted that they do not disclose, teach or suggest the features as recited in claim 1, as amended.

Morris, at par. 0050, only discloses the MPEG-2 format and the MPEG-2 TS stream. Morris does not teach an MPEG-4 format stream, an MPEG-7 format stream and/or a Wavelet transform format stream. Thus, it is respectfully submitted that Morris does not disclose, teach or suggest the features as recited in claim 2, as amended.

Furthermore, Applicants respectfully assert that dependent claims 3 and 4, as amended, are allowable at least because of their dependencies from claim 1, as amended, and because they include additional features that are not taught or suggested by the prior art. Therefore, it is respectfully submitted that claims 3 and 4, as amended, also distinguish over the prior art.

With respect to claim 5, as amended, of the present application, as noted above, the Examiner states that "Morris fails to explicitly teach interactive contents comprising information that enables an interface with a user" (Office Action, pg. 3, item 4), and as such, Morris at pars.

0051 and 0052, does not teach information on types of the multi-streams and the interactive contents, nor does Morris teach time information to synchronously reproduce and independently convert the multi-streams and the interactive contents, and furthermore, Morris does not teach time information to independently reproduce and independently convert the multi-streams and the interactive contents. The Examiner asserts that Rodriguez at par. 0073 teaches parental ranking information on the multi-streams and the interactive contents. This assertion apparently arises from a misunderstanding and a misreading of Rodriguez par. 0073, which states "EPG [electronic program guide] data typically consists of information describing program attributes such as program starting times and duration..., actors in program, parental rating" and other such information related to subscriber network television programming, i.e., TV show information. Thus, the "parental rating" information of a TV show concerns the audience age and maturity that are suitable for watching said TV show. The Examiner appears to be confusing "parental ranking" with "parental rating" information, which do not correspond to each other as parental ranking information pertains to ranking information on the multi-streams and interactive contents and such conversion information to convert the multi-streams and/or the interactive contents. Rodriguez does not disclose, teach or suggest the features as recited in claim 5, as amended. Therefore, it is respectfully asserted that Morris and Rodriguez do not disclose, teach or suggest the features as recited in claim 5, as amended.

With respect to claim 6 of the present application, and as discussed above, Morris, at par. 0008, discloses the reading of multi-streams. Notably, the following paragraph of Morris, par. 0009, states that the method of Morris accumulates "the data of the first and second elementary streams respectively in first and second queue structures," but does not teach reading data of the other data streams such as interactive content streams and navigation information streams. The above citations of Morris show the limitation of Morris' disclosure of MPEG-2 PS streams being limited to teaching only reading of multi-streams, such being the first and second elementary streams. Additionally, fig. 1, item 102 of Morris only shows a set top box used in DTV systems and thus, does not teach reading out interactive contents and reproduction control information from the information storage medium, as it is merely a figure showing an apparatus with no description or exposition on any methods related to the apparatus. And though Morris does teach reading out multi-streams, converting the read-out multi-streams into transport streams appropriate to DTV and multiplexing the transport streams based on the read-out preproduction control information to generate DTV streams, it does not teach data streams

comprising interactive contents and navigation information, as discussed above. Therefore, Morris does not suggest features as recited in claim 6.

Additionally with respect to claim 6 of the present application, Rodriguez, at paragraph 0019, only discloses interactive applications that are client-server applications used in a data networking environment, such as "Pay-Per-View programming, View-on-Demand programs, and interactive applications, such as Email, Internet connections, and electronic program guide (EPG) applications" (Rodriguez, par. 0019). Rodriguez at par. 0030 discusses the broadcast of digital television channels (DTCs) with the only mention of "interactive" pertaining to an "interactive download protocol for reliable downloading of data from a server...to an individual DHCT [digital home communication terminal]." Rodriguez, at pars. 0032 and 0036, discloses Video on Demand (VoD) services, and a VoD content manager, respectively. Furthermore, at par. 0042, Rodriguez discloses "one or more modulators...to convert the received transport streams into modulated output signals suitable for transmission over the transmission medium through the network," and does not suggest converting the read-out interactive contents into DTV interactive contents, because Rodriguez only discloses converting received MPEG-2 TS information into output signals suitable for transmission. Thus, Rodriguez does not suggest interactive contents and converting read-out interactive contents into DTV interactive contents. Therefore, it is respectfully submitted that Rodriguez does not disclose, teach or suggest features as recited in claim 6. Additionally, as shown above, neither Morris nor Rodriguez teaches the features as recited in claim 6, and there is no motivation to combine the two references as noted in the discussion of claim 1 above. Therefore, it is respectfully submitted that Morris, in view of Rodriguez does not disclose, teach or suggest the features as recited in claim 6.

Furthermore, Applicants respectfully assert that dependent claims 7 and 8 are allowable at least because of their dependencies from claim 6, and because they include additional features that are not taught or suggested by the prior art. Therefore, it is respectfully submitted that claims 7 and 8 also distinguish over the prior art.

With respect to claim 10 of the present application, the claim recites "converting the DTV interactive contents comprises:..." As the Examiner has stated on page 3 of the Office Action in regards to claim 1, "Morris fails to explicitly teach interactive contents comprising information that enables an interface with a user." If Morris fails to teach interactive contents in general, Morris can not teach the converting of such interactive contents. Therefore, it is respectfully submitted

that Morris does not disclose, teach or suggest the features as recited in claim 10.

With respect to claim 12 of the present application, as discussed similarly above, Morris discloses the reading of multi-streams. Yet, as the Examiner concedes, Morris does not teach reading data of the other data streams such as a navigation stream or interactive contact stream. Additionally, Morris in fig. 1, item 102 only shows a set top box used in DTV systems and does not teach a read-out unit reading out interactive contents and reproduction control information from an information storage medium. The figure does not teach such because item 102 of fig. 1 merely shows an apparatus labeled as a "set top box" and, moreover, as per Morris' description of fig. 1, item 102, at Morris par. 0046, item 102 is described as being for "decoding digital video signals, controlling access to pay channels and so forth," essentially it is a TV tuner. Furthermore, Morris at par. 0047 provides further description of fig. 1, item 102, stating that the "set top box 102 also decodes a desired programme from within the transport stream TS, to provide analogue audio and video signals to the TV set 108." Thus, at most, Morris discloses the conversion of MPEG-2 TS streams into analog signals. It does not convert MPEG-2 PS streams into MPEG-2 TS streams as item 102 of fig. 1 of Morris shows only TS streams as input signals. Thus, item 102 of fig. 1 of Morris does not suggest reproduction control information from the information storage medium. Furthermore, as noted above, with the Examiner's recognition that Morris does not teach interactive contents comprising information that enables an interface with a user, the assertion that Morris teaches a second transcoder converting the interactive contents read out by the read-out unit into DTV interactive contents is illogical because, as is conclusive from the Examiner's concession, disclosures in Morris do not relate to interactive contents.

In regards to Rodriguez and claim 12 of the present application, as noted above, Rodriguez, at par. 0019, only discloses interactive applications that are client-server applications used in a data networking environment as noted previously. Furthermore, Rodriguez, at par. 0030, discusses the broadcast of digital television channels (DTCs) with the only mention of "interactive" pertaining to an "interactive download protocol for reliable downloading of data from a server." Additionally, Rodriguez, at par. 0032 and par. 0036, discloses Video on Demand (VoD) services and a VoD content manager, respectively. Rodriguez, at par. 0042, discloses "one or more modulators...to convert the received transport streams into modulated output signals suitable for transmission over the transmission medium through the network," and does not suggest converting the read-out interactive contents into DTV interactive contents, as it

pertains to converting received MPEG-2 TS information into output signals suitable for transmission. Therefore, it is respectfully submitted that Rodriguez does not disclose, teach or suggest features as recited in claim 12.

Additionally, as neither Morris nor Rodriguez teaches the features as recited in claim 6, there is no motivation to combine the two references presently and there is no reason to combine the two references as per the reasons given above in the discussion of claim 1. Therefore, it is respectfully submitted that Morris in view of Rodriguez, does not disclose, teach or suggest the features as recited in claim 12.

Furthermore, Applicants respectfully assert that dependent claims 13-19 are allowable at least because of their dependencies from claim 12, and because they include additional features that are not taught or suggested by the prior art. Thus, it is respectfully submitted that claims 13-19 also distinguish over the prior art.

With respect to claim 20 of the present application, while Morris may teach a first transcoder converting multi-streams into transport streams, Morris at pars. 0064 and 0008 only discloses reading out information pertaining to first and second elementary data streams, or in other words, reading out multi-streams of the MPEG-2 PS. Also, as noted above, fig. 1, item 102 of Morris only displays a set-top box, as discussed above, and does not suggest a read-out unit reading out information recorded on an information storage medium comprising multi-streams and navigation information. Furthermore, par. 0008 of Morris does not disclose any signal processing, but rather is limited to reading data, because par. 0008 in its entirety states: "(a) reading from said input data stream successive blocks of data, said input data stream including data of first and second elementary data streams formed and multiplexed in compliance with a PS decoder model." Thus, Morris, at par. 0008, does not teach a signal processing unit processing the read-out information into reproduction signals. Therefore, Morris does not suggest features as recited in claim 20. Furthermore, with respect to Rodriguez, and as noted above, par. 0019 only discloses interactive applications that are client-server applications used in data networking. Rodriguez, at par. 0030, teaches the broadcast of digital television channels (DTCs), only mentioning "interactive" when disclosing an "interactive download protocol for reliable downloading of data from a server." Rodriguez, at pars. 0032 and 0036, only discloses interactive Video on Demand (VoD) services and a VoD content manager, respectively. Furthermore, at par. 0042, Rodriguez discloses "one or more modulators...to convert the received transport streams into modulated output signals suitable for transmission

over the transmission medium through the network,” and does not suggest converting the read-out interactive contents into DTV interactive contents. Additionally, while Rodriguez, at par. 0064, teaches a navigator application whose “core functionality includes volume and configuration settings” and “preferably handles channel navigation keys on the remote control device,” it is apparent that such a navigation application is meant for changing the channels and volume in a subscriber network television system. Such a TV channel navigation application does not teach a navigation engine controlling the DTV-stream generator based on the navigation information. Furthermore, Rodriguez par. 0073 relates to an electronic program guide, which is similar to the citation of Rodriguez par. 0064, and thus also does not teach features recited in claim 20 of the present application. Therefore, it is respectfully submitted that Rodriguez does not disclose, teach or suggest the features as recited in claim 20.

The Examiner’s assertion that claim 20 involves the division of an integral structure into various elements is not correct as there is no integral structure in Rodriguez nor Morris that is a single transcoder converting both the multi-streams into transport streams and converting MPEG-2 PS interactive contents into DTV interactive contents. Additionally, as the Examiner does not cite which reference teaches an integral structure of such a transcoder, and as Morris does not teach interactive contents, as per the Examiner’s own admission, and Rodriguez only teaches network applications, there is no basis for the assertion that there is an integral structure that is a transcoder with the features recited claim 20. As neither reference teaches an integral structure of various elements comprising features as recited in claim 20, the Examiner’s assertion that it would have been obvious to one of ordinary skill in the art to have a first transcoder converting the multi-streams into transport streams and a second transcoder converting the interactive contents into DTV interactive contents does not have proper foundation. Therefore, it is respectfully submitted that Morris, in view of Rodriguez does not disclose, teach or suggest the features as recited in claim 20.

Furthermore, Applicants respectfully assert that dependent claims 21-23 are allowable at least because of their dependencies from claim 20, and because they include additional features that are not taught or suggested by the prior art. Therefore, it is respectfully submitted that claims 21-23 also distinguish over the prior art.

With respect to claim 24 of the present application, which is dependant on claim 20, the rejection for claim 20 has been respectfully traversed above. The Examiner’s assertion that Rodriguez, at par. 0065, teaches interactive contents comprising HTML, XHTML, or XML, and

joint photographic experts group (JPEG) and portable network graphics (PNG) files is incorrect. Rodriguez, at par. 0065, teaches a platform library that is "a collection of utilities useful to applications, such as a timer manager, a compression manager...an HTML parser..." and other similar utilities. However, among the utilities, Rodriguez doesn't mention XHTML, XML, JPEG, or PNG, and as such, Rodriguez does not suggest interactive contents comprising HTML, XHTML, JPEG or PNG files. Therefore, it is respectfully submitted that Morris, in view of Rodriguez, does not disclose, teach or suggest the features as recited in claim 24.

Furthermore, Applicants respectfully assert that dependent claims 25-29 are allowable at least because of their dependencies from claim 20, and because they include additional features that are not taught or suggested by the prior art. Therefore, it is respectfully submitted that claims 25-29 also distinguish over the prior art.

Based on the foregoing, this rejection is respectfully requested to be withdrawn.

Claims 9 and 11 are rejected under 35 U.S.C. §103(a) as being unpatentable over Morris (U.S. Patent Application Publication No. 2001/0007568 A1) in view of Rodriguez et al. (U.S. Patent Application Publication No. 2002/0059623 A1) and further in view of Kato (U.S. Patent No. 7,106,946 B1). The rejection is traversed and reconsideration respectfully requested.

With respect to claim 9 of the present application, which is dependant on claim 8, the rejection of claim 8 has been respectfully traversed above. Additionally, the Examiner asserts that Kato teaches "the null packets for generation, scheduling and multiplexing" (Office Action, pg. 14) at: Kato fig. 1, item 14; Kato, col. 2, line 9; and Kato, col. 5, lines 4-14), and Kato does in fact disclose a null packet generator in fig. 1, item 14 and at col. 2, line 9. However, such null packet generator is for the recording of a transport stream, as col. 2, lines 7-10 state "A first transport stream recording device of this invention further comprises a counter to count the number of transport packets comprising the transport stream, and a null packet generator to generate null packets according to the count from the counter." As per Kato at col. 5, lines 4-14, the description of the null packet generator given therein is similarly limited to the recording of a transport stream and thus does not teach features as recited in claim 9. Because Kato does not suggest the generating, scheduling or multiplexing of null packets to generate the MPEG-2 TS, there would have been no motivation to combine such with either Morris or Rodriguez, both of which lack a motivation to combine the two as noted above in the discussion of claim 1. Therefore, it is respectfully submitted that Morris, in view of Rodriguez and further in view of

Kato, does not disclose, teach or suggest the features as recited in claim 9.

Furthermore, Applicants respectfully assert that dependent claim 11 is allowable at least because of its dependency from claim 6, and because it includes additional features that are not taught or suggested by the prior art. Therefore, it is respectfully submitted that claim 11 also distinguishes over the prior art.

Based on the foregoing, this rejection is respectfully requested to be withdrawn.

CONCLUSION:

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

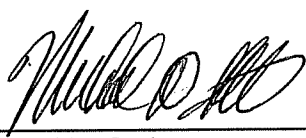
Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 503333.

Respectfully submitted,

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Date: 11/5/08

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